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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,880	06/24/2003	Takashi Takeuchi	NITT.0143	1301

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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/601,880	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment (7/02/2007) added the limitation of "per user" that changed the scope of the claims.

2. Claims 4 – 13 are pending.

3. Claims 1 – 3 had been canceled.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. (US 7020162 B2) in view of Allen et al. (US 20020162029 A1).

Regarding claims 4, 5, 6, Iwasaki et al. disclose a packet communicating system ("duplex optical distribution system" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29) comprising: an optical line termination (OLT) for subsidiarily connecting optical network units (ONU) (Fig. 4, "element 100 OLT" correlates to an optical line termination, "element 101 ONU" correlates to connecting optical network units (ONU); column 6, lines 17 – 18) by the Passive Optical Network type (PON) (Fig. 4, elements 114, passive double star interface (PDS-IF) correlates to the Passive

Optical Network type; column 7, lines 4 – 6), said OLT having a function for terminating the physical layer of the PON ("system signal termination" correlates to OLT having a function for terminating the physical layer of the PON; column 6, lines 22 – 25) and controlling bandwidths in physical lines between the OLT and the ONU ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40); and

Iwasaki et al. teach an optical distribution network system including an OLT; a plurality of ONUs and dynamic bandwidth assignment (Astract), but Iwasaki et al. do not teach explicitly a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of the users when authorizing the users, and the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line.

Allen et al. disclose a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the OLT (Fig. 2, element 206 B-RAS correlates to broadband access server (BAS); page 2, paragraph [0015], "subscriber provides the login ID and password assigned by their service providers which is transmitted to the B-RAS" correlates to BAS

having a function for authorizing users communicating with the Internet; Fig. 4, page 3, paragraphs [0038], [0040]), wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of the users when authorizing the users (page 3, paragraphs [0040], [0043]), and the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line (Fig. 3, pages 2- 3, paragraphs [0032], [0044], [0045]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of the users when authorizing the users, and the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line as taught by Allen et al. in order

to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001]).

Regarding claims 7, 9, 11, Iwasaki et al. disclose the packet communicating system ("duplex optical distribution system" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29) according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to send and receive packets, allocated between the ONUs and the OLT ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40), according to the number of users accommodated under the ONUs or bandwidths allocated to the individual users ("a minimum transmission bandwidth is assigned to each ONU independently" correlated to the number of users accommodated under the ONUs or bandwidths allocated to the individual users; column 8, lines 58 - 60).

Regarding claims 8, 10, 12, Iwasaki et al. disclose the packet communicating system according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to receive packets between the OLT and the ONUs for each of users accommodated under the ONU s ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40, lines 58 – 60).

Regarding claim 13, Iwasaki et al. disclose a packet communicating system comprising: a plurality of optical network units (Fig. 12, elements 2-n correlates to a plurality of optical network units; column 1, lines 60 – 67); a star coupler connected with the plural optical network units (Fig. 12, element 3 optical splitter correlates to a star coupler connected; column 1, lines 10 – 11, column 2, lines 6 – 13); and a packet communicating apparatus connected with the star coupler (Fig. 12, "element 1, optical line termination and element 3 optical splitter" correlates to a packet communicating apparatus connected with the star coupler; column 2, lines 6 – 13), wherein the packet communicating apparatus multiplexes sending data to the plural optical network units and sends the multiplexed sending data to the star coupler (Fig. 12, column 1, lines 27 – 36), the star coupler broadcasts the multiplexed sending data to the optical network units (column 1, lines 27 – 29), and each of the optical network units receives data directed to that optical network unit (column 1, lines 27 – 29, lines 64 – 67), wherein the packet communicating apparatus comprises: an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units ("dynamic bandwidth assignment control" correlates to an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units; column 8, lines 29 – 40); and

Iwasaki et al. do not disclose a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user

information used during the user authorization and the optical line termination sets bandwidths on a user basis.

Allen et al. disclose a server (Fig. 2, element 206 B-RAS correlates to a server; page 2, paragraph [0015]), connected to the line termination (Fig. 2, element 204 access multiplexer correlates to line termination; page 2, paragraph [0016]), that has a function for authorizing users who communicate with a network via the network units and the line termination (page 2, paragraph [0021]), and wherein the server uses user information used during the user authorization and the line termination sets bandwidths on a per user basis (page 3, paragraphs [0040], [0043], [0044]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user information used during the user authorization and the optical line termination sets bandwidths on a user basis as taught by Allen et al. in order to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001]).

6. Claims 4 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. (US 7020162 B2) in view of Ooghe et al. (US 20050276218 A1).

Regarding claims 4, 5, 6, Iwasaki et al. disclose a packet communicating system ("duplex optical distribution system" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29) comprising: an optical line termination (OLT) for subsidiarily connecting optical network units (ONU) (Fig. 4, "element 100 OLT" correlates to an optical line termination, "element 101 ONU" correlates to connecting optical network units (ONU); column 6, lines 17 – 18) by the Passive Optical Network type (PON) (Fig. 4, elements 114, passive double star interface (PDS-IF) correlates to the Passive Optical Network type; column 7, lines 4 – 6), said OLT having a function for terminating the physical layer of the PON ("system signal termination" correlates to OLT having a function for terminating the physical layer of the PON; column 6, lines 22 – 25) and controlling bandwidths in physical lines between the OLT and the ONU ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40); and

Iwasaki et al. teach an optical distribution network system including an OLT; a plurality of ONUs and dynamic bandwidth assignment, but Iwasaki et al. do not teach explicitly a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of the users when authorizing the users, and the BAS is provided with a special physical line to OLT for system control, and having a function for sending

and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line.

Ooghe et al. disclose a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the OLT (Fig. 2, element ENOD correlates to broadband access server (BAS); page 4, paragraphs [0079], [0080]), wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of the users when authorizing the users (Fig. 2, ANOD and ENOD, page 4, paragraphs [0079], [0080]), the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line (Fig. 2, page 4, paragraphs [0079], [0082]; page 6, paragraph [0126]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a Remote Authentication Dial In User Service (RADIUS) server managing information of

the users when authorizing the users, and the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths per user for the users to send and receive packets, through said special physical line as taught by Ooghe et al. in order to provide a method to guarantee for a service a bandwidth across an access network with a quality of service (as suggested by Ooghe et al., see page 1, paragraph [0001]).

Regarding claims 7, 9, 11, Iwasaki et al. disclose the packet communicating system ("duplex optical distribution system" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29) according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to send and receive packets, allocated between the ONUs and the OLT ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40), according to the number of users accommodated under the ONUs or bandwidths allocated to the individual users ("a minimum transmission bandwidth is assigned to each ONU independently" correlated to the number of users accommodated under the ONUs or bandwidths allocated to the individual users; column 8, lines 58 - 60).

Regarding claims 8, 10, 12, Iwasaki et al. disclose the packet communicating system according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to receive packets between the OLT

and the ONUs for each of users accommodated under the ONU s ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40, lines 58 – 60).

Regarding claim 13, Iwasaki et al. disclose a packet communicating system comprising: a plurality of optical network units (Fig. 12, elements 2-n correlates to a plurality of optical network units; column 1, lines 60 – 67); a star coupler connected with the plural optical network units (Fig. 12, element 3 optical splitter correlates to a star coupler connected; column 1, lines 10 – 11, column 2, lines 6 – 13); and a packet communicating apparatus connected with the star coupler (Fig. 12, "element 1, optical line termination and element 3 optical splitter" correlates to a packet communicating apparatus connected with the star coupler; column 2, lines 6 – 13), wherein the packet communicating apparatus multiplexes sending data to the plural optical network units and sends the multiplexed sending data to the star coupler (Fig. 12, column 1, lines 27 – 36), the star coupler broadcasts the multiplexed sending data to the optical network units (column 1, lines 27 – 29), and each of the optical network units receives data directed to that optical network unit (column 1, lines 27 – 29, lines 64 – 67), wherein the packet communicating apparatus comprises: an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units ("dynamic bandwidth assignment control" correlates to an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units; column 8, lines 29 – 40); and

Iwasaki et al. do not disclose a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user information used during the user authorization and the optical line termination sets bandwidths on a per user basis.

Ooghe et al. disclose a server (Fig. 2, element ENOD correlates to broadband access server (BAS); page 4, paragraphs [0079], [0080]), connected to the line termination (Fig. 2, page 4, paragraphs [0079], [0080), that has a function for authorizing users who communicate with a network via the network units and the line termination (page 4, paragraphs [0079], [0080]), and wherein the server uses user information used during the user authorization and the line termination sets bandwidths on a per user basis (page 4, paragraphs [0079], [0080], [0082]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user information used during the user authorization and the optical line termination sets bandwidths on a per user basis as taught by Ooghe et al. in order to provide a method to guarantee for a service a bandwidth across an access network with a quality of service (as suggested by Ooghe et al., see page 1, paragraph [0001]).

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Saikusa (US 6931013 B2) disclose a PON transmission system and a dynamic band assignment system to be employed in the same which permits high speed band variation, to effectively use up band in PDS period, and to adapt to variation of traffic type.
- Yokomoto et al. (US 20020067529 A1) disclose passive optical network transmission system, ATM-passive optical network transmission system, optical network unit of ATM-passive optical network transmission system, and optical line terminator of ATM-passive optical network transmission system.
- Nakaishi (US 20020021472A1) discloses ATM-PON dual system, optical line terminal, optical network unit and ATM-PON dual method
- Monzawa et al. (US 20050058139 A1) disclose an optical network unit and an optical line terminal which efficiently control the data receiving and dechurning processes in a passive optical network.
- Allen et al. (US 20020162029 A1) disclose a subscriber authentication service is provided by a network access system. The system includes a remote access server (RAS) having ports for communicating with subscribers, a management interface for associating line identifiers with the subscriber ports, and a database for storing the line identifiers.

- Osafune et al. (US 20030065787 A1) disclose a method to provide data communication service, which enables each service provider to provide each user with both contents service and Internet connection service.

Response to Arguments

2. Applicant's arguments filed 7/02/2007 with respect to claims 4 – 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C. Lee/::<9/04/2007>

JAY K. PATEL
SUPERVISORY PATENT EXAMINER